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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,706	06/17/2005	Masaaki Sakai	Q73663	4822
23373 7590 09/12/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER ZIMMER, ANTHONY J				
ART UNIT		PAPER NUMBER		
1793				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,706

Applicant(s)

SAKAI, MASAOKI

Examiner

ANTHONY J. ZIMMER

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-850)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date 1/25/2007 and 6/17/2005

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group 1, claims 1-7, in the reply filed on 7/16/2008 is acknowledged. The traversal is on the ground(s) that Groups 1-3 do not lack unity because the product of the instant invention is different and produced by a different process than that of Aldridge. This is not found persuasive because the claims do not require the process, and the prior art teaches the product as claimed (See the explanation provided in the Restriction requirement of 6/16/2008 and instant claim 1).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 recite the limitation "the surface layer region." There are insufficient antecedent bases for this limitation in the claims.

Claims 1 and 2 recite the limitation, "to a depth of 30%." Such a limitation renders the claims indefinite because the claims do not recite what 30% is modifying.

Claims 1 and 2 recite the limitation "the support surface." There is insufficient antecedent basis for this limitation in the claim.

All dependent claims of claim 1 are rendered indefinite as a result.

Claim 6 recites the limitation "the particle size." There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the specific surface area." There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the pore volume." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Aldridge '354.

In regard to claim 1, Aldridge teaches heteropolyacid or heteropolyacid salt deposited on a porous alumina support. The heteropolyacid or salt thereof is deposited and forms a layer on the outer surface of the support including the surface of the pores (i.e. part of the support surface). Thus, the heteropolyacid or salt thereof is substantially present to a depth of 30% from the surface. See Example 1.

In regard to claim 2, since the heteropolyacid or salt thereof forms a layer on the surface of the support, substantially all or 100 mass% thereof is present to a depth of 30% from the surface.

In regard to claim 3, Aldridge teaches phosphomolybdic acid. See Example 1.

In regard to claim 5, Aldridge teaches alumina (see Example 1), silica-alumina, zirconia, titania, and magnesia. See column 3, lines 46-57.

In regard to claim 6, Aldridge teaches 14-35 mesh alumina (or 0.5-1.41 mm particle size). See Example 1.

In regard to claim 7, Aldridge teaches a surface area of 162 m²/g and pore volume of 0.682 cc/g (mL/g). See Example 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aldridge '354 in view of Suzuki '996.

Aldridge does not teach using a salt as required by the claim.

However, it would have been obvious to one of ordinary skill in the art to use a heteropolyacid salt as it is known in the art (i.e. from Suzuki) that heteropolyacids and metal salts thereof (of groups included in the claim) can be and often are interchanged in heteropolyacid catalysts; thus it would have been obvious to one of ordinary skill in the art do so in order to form a heteropolyacid catalyst. See Suzuki column 2, line 27 – column 3, line 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Soled '739, Soled '725, Kresge '881, Kresge '945, Masloboishchikova '195, and Prasad '435 teach heteropolyacid catalysts.

Liu et al. teaches employing heteropolyacids in the process of making Pt-Mo bimetallic ensembles that are present on a support in an eggshell structure (Abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. ZIMMER whose telephone number is (571)270-3591. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ajz

/Steven Bos/
Primary Examiner, Art Unit 1793